DOCUMENT RESUME

ED 187 298 HE 012 942

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TITLE Continuing Professional Education and the University: The Practice Audit Model as a Process for Needs Assessment and Program Development.
PUB DATE Mar 80
NOTE 29p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (Washington, DC, March 1980).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Higher Education; *Interprofessional Relationship; Models; Needs Assessment; *Professional Associations; *Professional Continuing Education; *Professional Occupations; *Program Content; *Program Development
IDENTIFIERS *ASHE Annual Meeting 1980

ABSTRACT

A context for continuing professional education is given, and a process of encouraging the university and practicing professionals to combine efforts for program quality. A Practice Audit Model is proposed to facilitate this relationship: it is a systematic process for identifying the educational needs of the practitioner who has a well-developed professional organization. The model also includes a generalized and systematic procedure for assessing the relative importance of these needs and for translating them into educational programs for the professional target group. A recent experience with pharmacists is described that illustrates the use of the model in developing continuing professional education options. Consideration is given to the method of collaboration between professional group and university to maximize the effectiveness of the entire process. References are provided. (Author/MSE)

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Continuing Professional Education and the University: The Practice Audit Model as a Process for Needs Assessment and Program Development

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Paper presented at the 1980 Conference of the Association for the Study of Higher Education, Washington, D.C.
March 4-5, 1980

HE 012 942

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This paper was presented at the Annual Meeting of the Association for the Study of Higher Education held at the Washington Hilton in Washington, D.C. March 4-5, 1980. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

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Continuing Professional Education and the University: The Practice Audit Model as a Process for Needs Assessment and Program Development

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Abstract

This paper develops a context for continuing professional education and a process which links the university with practicing professionals in a collaborative learning mode. A primary vehicle for the linkage is the Practice Audit Model, a systematic process for identifying the educational needs of practitioners who have a well developed professional organization. The model also includes a generalized and systematic procedure for assessing the relative importance of these needs and for translating them into educational programs for the professional target group. A recent experience with pharmacists is presented to illustrate the utility of the model in developing continuing professional educational options. Consideration is given to the method of collaboration between professional group and university to maximize the effectiveness of the whole process.

A Context for Continuing Professional Education

Part of the unending challenge to the relationship between the university and society lies in a concern for how the theoretical,

abstract, apparently esoteric, and often speculative knowledge of the academic world can be translated into applied forms. One link between the "ivory tower" and the "market place" has been forged around the concept and the utility of technology. The development of knowledge into technique has taken on a dynamic of its own in the modern industrial society thereby multiplying both benefits and problems. The second linkage, a tie between organized knowledge and its application to the lives and problems of individuals, comes about through the tradition of the professions. The altruistic practitioner, carefully trained and certified, tempers knowledge with wisdom and skill. It is this second relationship, that of university to profession, which is addressed here.

In the United States, but not necessarily elsewhere in the world, the universities gradually assumed a preeminent role in the preparation of professionals. That transition took place in the decades between 1890 and 1930, accelerated by the compelling rationale developed by Flexner (1910) for medical education. The affiliation of medical schools with universities was followed by an incorporation of law schools, theological seminaries, business schools, and lately by conservatories of music and art (Bacon, 1979). The sequence of undergraduate preparation and professional school training is now acknowledged as a general model.

That same requirement for an active connection with new knowledge that first propelled the professional schools toward an alliance if not a merger with universities is now at work in the area of professional updating and continuing education. The need for some form of continuing education in every profession can be estabished <u>a priori</u>. By definition, the basis of practice in a profession is "a specialized body of

knowledge and skills that are acquired during a prolonged period of education and training" (Schein, 1972; Parsons, 1968; Anderson, 1974). Knowledge itself has changed in the last four or five decades from an "architectonic" form to a dynamic form in which new knowledge is a transforming force (Etzioni, 1968). It follows, therefore, that the cannons and codes of practice must include a means for continuing professional learning.

In the older ethos of each profession an obligation to keep current was defined in terms of individual behavior. Professionals were socialized to those behaviors in the final stages of schooling. A knowledge-rich environment was maintained by journals and other publications, by commercial literature, and by short-cycle demonstration seminars to assist individuals in learning the latest procedures. As the pace of technological innovation and diffusion increased, the scope of knowledge required to practice broadened and spcialization reached new levels of refinement. As Hughes noted (1973), "Perhaps the most significant thing about contemporary education is the great increase in the amount of theory and practical skill to be taught and learned." The magnitude of these changes severly strained the informal learning structure and prompted a renewed search for a more systematic way to update the knowledge base of practitioners.

Universities have had a part in providing continuing education for the established professions, but it has been a modest contribution. Short-term, nondegree, technical and clinical offerings have proved helpful to many occupations and a few professions. By and large, however, the special nature of continuing education as it emerged under the

impetus of the land grant heritage and extension work has not fitted easily with the needs of the professions.

The current situation has been summed up by Anderson (1974), "The need for continuing education for all professionals is now generally recognized. . . . Recognition has not brought clarity as to how it should be managed. A major isssue has been: should continuing education be a primary obligation of the initial educating organization, i.e., the professional school, or of the organized profession?"

The dilemna might be unblocked if a truly collaborative approach could be formed to combine the particular contributions each group, professors and practitioners, can make to continuous learning. This collaborative mode must link the world of day to day practice with the educational functions that reside in the disciplines of the university.

The Practice Audit Model

The Practice Audit Model offers the foundations for a collaborative relationship by which the interests and needs of the profession are joined with the knowledge and skills of university faculty in a well defined manner.

This section moves from the problem definition stage to a proposed solution for developing practice-oriented continuing professional education programs. It discusses the concepts underlying the development of the Practice Audit Model, an application of the Model to the pharmacy profession, and some of the implications of this suggested approach for continuing professional education program development.

Model Background

The concepts underlying the Practice Audit Model have evolved from developments in the state-of-the-art for educational needs assessment and the experience of the senior author in working in this area over the past ten years. Part of this experience has included a review of the needs assessment literature in education and business. Although the organization and analysis of this review has just begun, one preliminary conclusion has emerged. Researchers now speak of needs assessment models, the process of needs assessment and program development, and the importance of practice standards and competency as a basis for continuing professional education (Anasti, 1976; Houle, 1977; Lindsay et al., 1974; Pottinger, 1977; Scriven and Roth, 1978; Shimberg, 1975). In addition, the accepted methods and procedures for conducting needs

assessment studies have become more sophisticated and increasingly systematic in recent years (Wilson, 1977; Lindsay, 1978).

In spite of this somewhat optimistic conclusion regarding the needs assessment literature, two major deficiencies remained and were addressed in developing the Practice Audit Model:

1. The lack of a systematic link between identified need and the program development process.

2. The lack of an explicit recognition of the necessity for consultation with, and active participation in, the entire needs assessment/program development process by representatives from the target group of professionals and appropriate faculty from the University.

To address the first major deficiency, Lindsay et al. (1974) developed the Content-Based Group-Assessment Model using a target group of physical educators. This study, which employed a knowledge-based definition (a 260-item test called the "Inventory of Recent Knowledge in Physical Education") to assess needs and provide the basis for program development, has been quite successful in generating noncredit and certificate programs for physical educators in Pennsylvania (Kelley, 1976).

Work with this model emphasized the necessity for further exploration and development and led to the present research which is an attempt to build upon the earlier research and to address the second major deficiency uncovered in the needs assessment literature.

Model Development

The development of simple needs assessment approaches into a more complex and recursive model that addresses two conceptual and structural needs assessment problems was undertaken at The Pennsylvania State

University. The impetus for developing the Practice Audit Model came through an informal consortium between Pennsylvania's four pharmacy schools[1] and Penn State. The purpose of that consortium was to plan for the coordinated delivery of pharmacy continuing education programs throughout the Commonwealth of Pennsylvania. During preliminary meetings it became apparent that merely improving the delivery of the schools' current continuing education program would not meet the needs of today's pharmacists. With this realization, consortium members asked Planning Studies in Continuing Education, the organization directed by the senior author, to help them conduct a needs assessment study of Pennsylvania's pharmacists. After consultation with the Director of Education of the American Pharmaceutical Association and representatives of the Pennsylvania Pharmaceutical Association, a four-party, multi-disciplinary project team was formed.[2]

Formation of the project team at the beginning of the project was a departure from prior needs assessment efforts as it brought together university and profession resources. This multi-party and multi-disciplinary team created the basis for the development of the model.

The next step was the development of the following goal for the pilot Pennsylvania Pharmacists Professional Development Program. The

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[1]University of Pittsburgh, Temple University, Duquesne University and the Philadelphia College of Pharmacy and Science.

[2]Team members included a needs assessment specialist and a continuing education delivery systems specialist from the University, the director of education of the American Pharmaceutical Association, the president and the director of continuing education of the Pennsylvania Pharmaceutical Association, and faculty members from the four pharmacy schools.

goal, established at a pre-planning conference attended by the research team and consortium members was:

> To obtain information on the practice needs of Pennsylvania Pharmacists that can be used by a consortium of pharmacy schools in planning a program of professional development that will be organized, accessible, ongoing, and, most importantly, practice-oriented.

It was also decided to use an assessment center (MacKinnon, 1975) approach to evaluating the education needs of pharmacists, another departure from previous needs assessment practices. The assessment center approach, coming from the field of personnel psychology, is an intensive "broad band" approach usually applied to the evaluation of executive personnel. In its application, the professional is observed in a variety of settings--management games, group discussions, tests, and interviews--ususally over a one- to three-day period. Advantages of this approach to program development over a typical survey approach are obvious.

A recent survey, "Inventory of Responsibilities of Pharmacists," conducted by Educational Testing Service for the American Association of Colleges of Pharmacy and the American Pharmaceutical Association provided a framework for the assessment center approach. Based on responses from a national panel of practitioners, this study provides an analysis of pharmacists' responsibilities with regard to relative importance, time spent, and level of judgment required (AACP/APhA, 1978). Subsequent analyses of the study's results by a joint AACP/APhA Task Force led to the publication of professional practice standards for pharmacy (Kalman and Schegel, 1979). To the authors' knowledge, pharmacy is the first and only profession to have developed and published such standards.

The project team developed the required assessment materials and process at a two-day workshop. Among the materials prepared was a work-

book containing seventy-one items to assess pharmacists' application of current knowledge. Questions were developed to reflect contemporary practice situations. A series of interviews was also designed, focusing on community and hospital pharmacy management, communications with patients (especially social/psychological aspects), and general knowledge related to the practice of pharmacy.

Additional tasks for the planned assessment workshop included two performance situations: an errors and omission exercise in which the pharmacist was asked to detect mistakes or discrepancies in an array of prepared prescriptions, and a surgical-appliance exercise that required the pharmacist to demonstrate his ability to properly fit a "patient" with varous prosthetic devices, and use various devices, such as a syringe.

Workshop Participants

Planning Studies further enlisted the aid of the pharmacists' professional association, the Pennsylvania Pharmaceutical Association, to obtain participants for the workshop. Its executive director selected seventy-five names from a list of approximately 5,000 licensed, practicing pharmacists. From this list, a sample of forty was chosen. The sample included both men and women representing all practice settings, geographic regions of the state, and years in practice, as well as a number of pharmacy leaders. These leaders were clearly active in the profession and aware of the problems affecting large numbers of practitioners. Their participation contributed to the acceptance of the resulting programs on the part of practicing pharmacists.

The Assessment Workshop

The workshop tasks required approximately seven hours to complete. Two identical one-day workshops were planned to minimize the amount of time participants would be away from their work. Participants were invited to select either of the two consecutive 24-hour sessions which began and ended at noon. Nineteen participants came to each session and the two groups were essentially identical in all demographic characteristics.

The workshop afforded private rooms for separate practice tasks and interviews, as well as a central room for coordination and group tasks. Participants worked on the written assessment and case studies in the central room. During that time they were called out individually, in rotation, to meet with workshop staff members for five interviews and demonstration tasks. Thus, the process used a variety of activities and performances to obtain an indication of competencies in a number of job-related areas.

Performance Analysis and Program Development

A preliminary analysis of the workshop participants' performance on the various interviews, tests, and exercises was carried out by the project team. Essentially, each project team member analyzed the information obtained from the tasks that he or she was responsible for developing and administering. Although the performance analysis and program developmental activities are viewed as an ongoing activity, a few highlights of the workshop results follow.

Pharmacists were generally familiar with those drug products which they frequently dispense. However, their knowledge was limited about

basic mechanisms of drug actions, indications for use of drugs, side effects/adverse effects, the categories of drug products, and information which should be given to patients. The preliminary results suggest, assuming the workshop sample is representative, that pharmacists are not up to date with the responsibilities of their "clinical pharmacist" role.

Questions and problem solving activities used in the assessment procedure were developed around the various disease states which are most frequently encountered, i.e., those chronic diseases for which prescriptions are most frequently written. The intent of these questions was not to test the pharmacist sample about their understanding of the disease states, per se. It was rather to suggest situations related to actual practice. In doing so, various terminology, signs, and symptoms, drug treatment plans, laboratory values, etc. were used. Responses to these situations suggested that many pharmacists are not familiar with a large body of information which relates to the rational prescribing of drugs. Consequently, many pharmacists do not recognize the importance of this kind of information and cannot use it when making decisions about appropriate drug therapy.

Based upon the preliminary analysis of the assessment workshop results, the project team concluded that the selection of drugs was the top priority for program development. Accordingly, a four-part program, centering on drug product selection, was developed by the project team. Time limitations preclude a discussion of the program content, but the titles provide some indication of its scope: Part I - Legal Aspects of Drug Product Selection; Part II - How Drug Product Performance is Measured; Part III - Factors Influencing the Bioavailability of Drug

Products; Part IV - Case Studies in Drug Product Selection. The Program also included self-assessment exercises, suggested reading, and other supporting materials.

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Program Implementation

The program was staffed by faculty from Pennsylvania's four schools of pharmacy and administered by Penn State's Coordinating Council for Continuing Education in the Health Care Systems with the sponsorship of the Pennsylvania Pharmaceutical Association. The Council's telephone conference system was used to deliver the four programs during September, October, November, and December, 1979, to 304 pharmacists at forty different sites throughout Pennsylvania.

Plans are underway to develop a series of integrated programs to cover a three- to four-year cycle of continuing professional education. These programs will be based upon further analyses of the data from the assessment workshop and other input from pharmacist professional groups. These plans are predicated on the need for regular and systematic updating of persons in the profession.

Practice Audit Model Phases

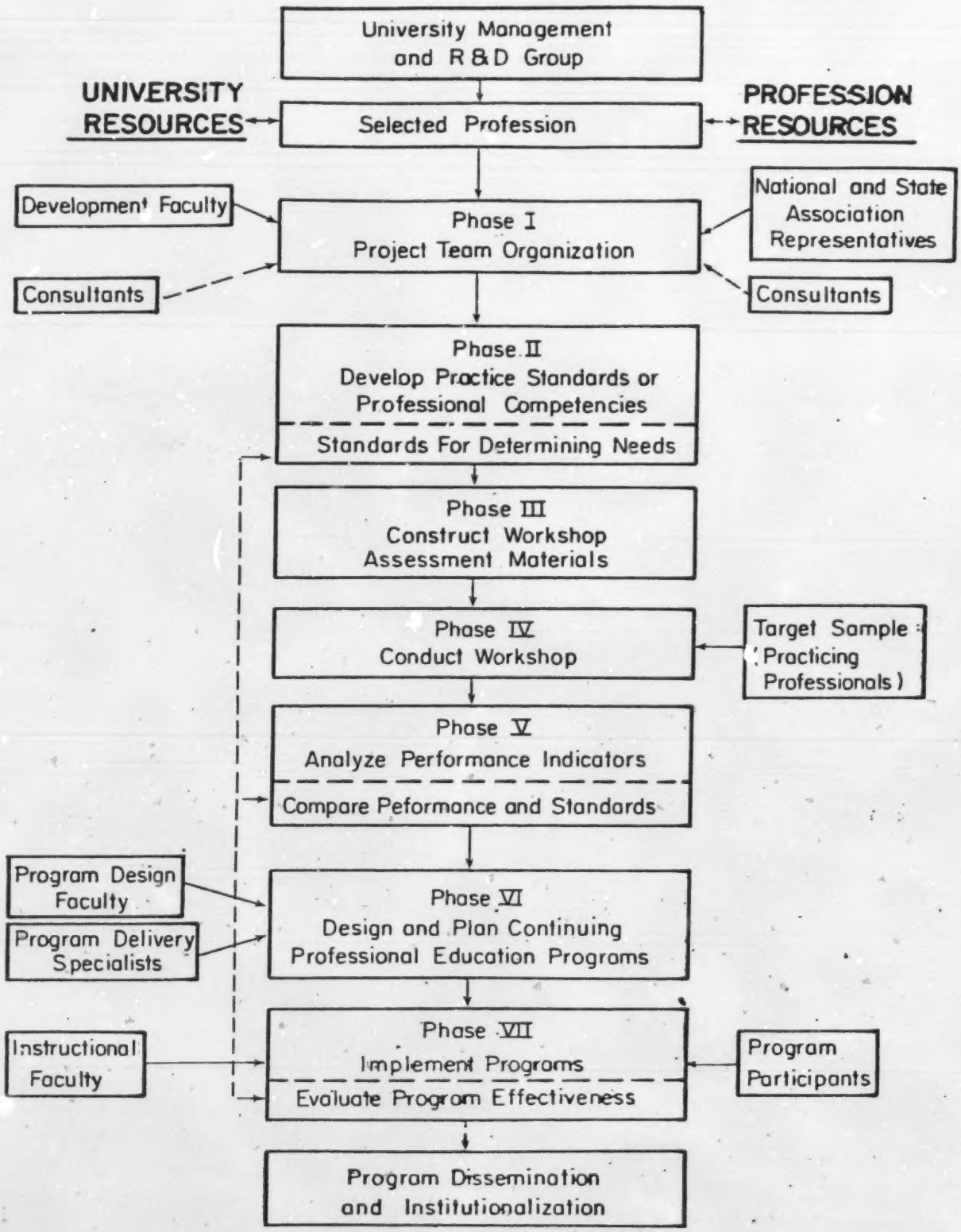
We turn now to the generalized model which can be adapted and applied to other professional settings and to high level occupations which have the attributes of a profession. Two conditions are prerequisites: There must be an established professional organization that includes among its members just about all pactitioners in the field. Second, the importance of common standards, quality standards, must be understood.

Several writers have recently proposed the concept of a competency assurance program as the basic goal for continuing professional education (Kalman, 1978; Wilson, 1977). The deceptively simple notion of a competency assurance program is that the individual professional assumes primary responsibility for his ongoing professional education. However, for this to take place, practice standards for the profession must be established to enable the development of self or group assessment materials. These materials would enable professionals to determine where they stand in relation to what they should be doing and how they should be doing it. In addition, professionals must be provided with the opportunities and resources to remedy practice deficiencies. For exam-

ple, it is anticipated that the programs and materials which are a product of the Practice Audit Model will promote the competency assurance program concept for the pharmacy profession.

The current version of the Practice Audit Model, which emerged from an application of an earlier version to the pharmacy profession, is based on seven developmental phases. The model begins with an explicit recognition of the necessity for a systematic linkage between university and profession resources. These resources are brought together in a project team which remains intact throughout the entire process. Model phases and a schematic of the needs assessment/program development process are shown in Figure 1. The process begins with a project organization phase, linking university and professional resources and ends with an ongoing evaluation phase. Program dissemination and institutionalization activities, while not part of the model, are shown for completeness. The necessity for an organization structure to provide continuity for the process is indicated by the first box, labeled "University Management and R&D Group," in Figure 1.

Phase I: Project Team Organization. After a profession has been selected, the Practice Audit Model process begins with the development of project team. A project team has three subgroups: needs assessment specialists from the university; professional group representatives from the target profession, which include national and state directors of continuing education; and other statewide officers and university faculty who are recognized experts in the professional disciplines selected. The project team is the principal instrument of collaboration and it operates through all the phases thereby giving both continuity and kept the development process.



Practice Audit Model

Phase II: Develop Practice Standards or Professional Competencies. The project team establishes project goals and objectives for the selected professions. Practice standards or professional competencies are developed either from the existing professional literature or by the project team. Performance criteria for the competencies are also developed so that standards for determining needs can be established. The stipulation of practice standards in the most critical areas of the profession and the explicit statement of performance criteria related to each standard is the foundation for all subsequent steps.

Phase III: Construct Workshop Assessment Materials. The objective of this phase is the development of instruments, procedures, and processes for the needs assessment workshop. Using the framework developed in the preceding phase, the project team designs materials and methods for assessing the performance level of the target group professionals on the established practice standards or competencies. It is in this phase that the contributions of assessment specialists from the university become important. A "workshop" is not the only form of performance assessment available, but when other forms are designed they must stay close to the realities of a practice situation. Games and simulations might be used if they could be constructed to meet the essential conditions.

Phase IV: Conduct Workshop. A representative sample of the target group professionals is selected and invited to attend the needs assessment workshop. The workshop objective is to obtain performance indicators to be used to infer practice-oriented educational needs.

Phase V: Analyze Performance Indicators. The target sample's performance on the practice-oriented competencies is estimated and compared with the standards established in Phase II. Estimates of group performance are systematically compared to practice standards, with the resulting gaps or deficiencies forming the basis for determining the educational objectives of professional development programs for the target group. From the viewpoint of the learning specialist the outcomes of this phase are very valuable. By comparing assessed performance with practice standards, a very clear statement of learning needs is achieved. The statement is ecplicit, rooted in reality, behavioral in nature, and parsimoniously displayed. Rarely is an educator given so clear a summary of needs.

Phase VI: Design and Plan Continuing Professional Education Program. This phase, the least systematic step, is one of the keys to the entire needs assessment/program development process. It requires close collaboration on the part of all project team members to achieve the project goals. At this point, program design faculty and program delivery specialists may be added to the project team to assist with the program design and delivery activities. It should be noted that the program development phase is an iterative process that continues until the professional development plan is fully implemented.

Phase VII: Implement Programs (Evaluation). The basic objective of this last phase, also an iterative one, is to conduct and evaluate the programs developed in Phase VI. It involves designing the delivery systems and associated program materials, designing a fee structure, program promotion, and evaluation methods and procedures. This phase

also affords the opportunity to revise and modify the professional development plan based upon feedback received from the target group of professionals. Instructional faculty, from the university or profession, may be used during this ongoing phase to conduct the programs that have been developed.

Model Significance

The Practice Audit Model, which was developed to link university and profession resources for the continuing professional education needs assessment/program development process, differs from other needs assessment efforts in a number of important ways. First, the impetus for the model development and application came from a consortium of Pennsylvania's four pharmacy schools and The Pennsylvania State University. Second, it involved and linked at the earliest stages of the project, deans of pharmacy schools, academic experts, practitioners, and professional association leaders. Third, the content for the needs assessment procedures came from professional practice standards, thus emphasizing the project's orientation toward needs that arise from practice situations. Fourth, the project drew upon concepts from the assessment center literature in developing the needs assessment procedures. The needs assessment workshop process involved faculty and practitioners in a structured face-to-face situation that provided for a broad-based and critical analysis of the participants' behavior on the part of the workshop faculty. Fifth, three different assessment techniques, paper and pencil tests and exercises, interviews, and simulated performance situations, each of which yields information that

complements the other, were used in determining the knowledge and skill needs of a representative group of pharmacists.

The significance of the project for Pennsylvania's pharmacists should also be noted. The project included several factors which will increase the support and legitimacy of the continuing professional education programs that grew out of the Practice Audit Model project. Four schools of pharmacy were involved in the attempt to serve not just their own alumni, or pharmacists in their immediate neighborhood, but all pharmacists throughout the State. The current and future programs will not simply be "laid on" by experts, but were and will be based on needs expressed by practitioners directly to the program developers. Finally, professional association leaders at all levels were involved in the development of programs, with the expectation that their inclusion will facilitate support and participation by members of the profession and publicity about the programs.[3]

The potential impact of this program development effort is broad. In addition to the 304 participants in the Drug Product Selection program, there are approximately 5,000 other practicing pharmacists in

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[3]At the December 1977 meeting, the Executive Council of the Pennsylvania Pharmaceutical Association pased the following resolution:

> "That the Executive Council of the Pennsylvania Pharmaceutical Association encourage and support the four schools of pharmacy in Pennsylvania, The Pennsylvania State University, the American Pharmaceutical Association, and the Pennsylvania State Board of Pharmacy in the production of the 'Pennsylvania Pharmacist's Professional Development Program' as an ongoing effort to maintain the competence of our pharmacists and for the patients which they serve."

Pennsylvania whose opportunities for obtaining relevant, practice-oriented continuing education will be improved.

Model Significance: for the University

The experience with the Practice Audit Model thus far in the case of the pharmacy profession tests the main features of the analytical process but touches only part of the significance this approach carries for the university, the less challenging part at that. So far the lines of involvement between practice and learning have led to the professional schools lodged in the universities. But these units are already committed to the preparation of professional practitioners, pharmacists in this case, and normally monitor aspects of the field simply to keep the course work up to date. These schools, however, scarsely represent the full range of resources a university can muster to address an issue or explore a problem. The constellation of talent within a professional school tends to concentrate around fundamentals and the topics of the immediate past. There is an emphasis on past practices to the focused specialization in the program and in the organization even though individuals may be working at the forefront of the field.

As soon as the larger question is broached of how continuing education for the other professions can relate to the whole university a series of new topics appear. First one must examine the assumption that efforts to construct programs of continuing education for the top level, knowledge-based professions is an activity with enough intellectual substance and scientific value to warrant serious attention from the core of the university, its best faculty and its top leadership.

Certainly the justification is even stronger for this participation than that offered by the usual pattern of ancillary courses and workshops that serve so successfully the short-term needs of local groups, the main fare of continuing education programs. Equally certain is the fact that careful consideration will have to be given to the implications acceptance of the assumption carries for university organization, for attitutdes of faculty and administrators, and for the value structure of an academic institution.

As an illustration let us examine a case, hypothetical at this point, in which the Practice Audit Model generates a serious question of ethics in the dispensing of certain classes of drugs. We could have speculated on emerging and unfamiliar topics in any area of the profession; the appearance of a new line of complex chemical compounos, or a new definition of the treatment team of physician, nurse, technician, and pharmacist. Such an ethics question, however, allows us to range more broadly in thinking about the university role. It presents philosophical and psychological dimensions with overtones leading into sociology of the professions and the political science of public regulation. These are specialized areas of knowledge and analysis not generally represented on the faculty of a Pharmacy College. What is required of the university to respond to this kind of demand for continuing professional education?

In terms of organization, the collegiate unit and its dean are called upon to develop formally a capability for outreach beyond the usual boundaries of usual control. In the recent past the customary answer to this kind of situation has been the creation of a center, institute, laboratory, or unit with singular responsibility. An

alternative to such satellites is a redefinition of functions that places continuing education on the same level as teaching, research, and independent consulting. The dean and department heads are called upon to add a new dimension of flexibility to work schedules and to the academic accounting. This dimension will attempt to capture more precisely the distribution of faculty time, that most fundamental of resources. Attitudes of colleagues, administrators, and reviewers will have to be altered to accept this new kind of activity as credible and valuable to the academic enterprise. The difficulty here is intensified by the long-standing view that continuing education is a marginal endeavor in which faculty participate as an "add-on" to their regular activities. The value structure as manifest in the pattern of rewards and recognitives is also too narrow to accommodate faculty involvement in high-quality, intellectually challenging activity arising from professional needs. It is, of course, unreasonable to expect a wholesale transformation in these basic and sensitive areas over a short time. Nevertheless, the directions can be set toward the institutionalization of continuing professional education. These are challenges only the most ingenious and alert universities will be able to meet.

A second challenge to the university directed at the institution in its role as the preeminent learning institution of our society emerges when continuing professional education is based on the Practice Audit Model. Can the expert knowledge and technique developed in the university around the learning process, particularly as it applies to adults, be redesigned in new ways? There is more depth to such a question than might first appears for, in no sense, is a matter of simply transplanting the course-class-credit-campus structure into a new

setting. First of all there is an emphasis on designing learning situations that will respect the differences in style and preference that mark a mature, able, and established group of professionals. Their common point of objection to the arbitrary authority of the classroom setting and the teacher in that setting must be overcome. The collaboration between practitioner and professor that is so much a part of the Model can be continued into the learning situation. A second key point is also visible. The emphasis is not on constructing instructional systems for school settings but on designing learning experiences for individuals. This kind of concentration on learning is not the exclusive province of schools of education which tend to focus on instruction. It is found throughout the university at the root of scholarly activity. Scholars in all fields are, preeminently, learners and it is learning skills they are called upon to share. A third aspect of this challenge is also visible between the lines of the previous paragraphs. The media for learning in continuing professional education will require special attention and skill. The setting is rich with all the possibilities deigners have been trying to develop as alternatives to formal classes except that, in this case, it is not an alternative but the central theme of the story.

The strengths of the approach are clear: basing continuing education on competencies which are oriented to practice insures constant touch with reality. The linkage of university and professional resources and the involvement of the profession at every stage maintains a broad base of participation. In future applications of the model, the University can to make its unique contributions by stimulating interest across the professions and by adapting the Practice Audit Model. The

P.A.M. process itself, by virtue of the extensive interaction among practitioners, assessment experts, representatives of the professional association, scientific and learning specialists, and others, provides an inherent flexibility that widens the range of possibile applications. Finally, the program provides for a repetition of the process in a three- to four-year cycle, thus providing continuity to lifelong learning. Moreover, as pressure builds for mandatory continuing education in Pennsylvania as elsewhere, this needs assessment/program development process may serve as a general model through which the different professions may respond to the needs of their members.

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